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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,872	11/14/2003	Matthias Eberhard Sohn	11884/405801	1867

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EXAMINER

VU, TUAN A

ART UNIT	PAPER NUMBER
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2193

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,872

Applicant(s)

SOHN ET AL.

Examiner

Tuan A. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed 11/14/2003.

Claims 1-16 have been submitted for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 11-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 11 recites a repository generator comprising an interface for receiving specification, an engine for performing generation of intermediate representation; and a generator to generate a object repository. As scanned from the specifications, these 3 entities are construed as software embodiments represented as having some functionality for interfacing, generating intermediate format and repository data. Software entities with some functionality that are claimed without reasonable teaching of hardware support or tangible computer storage will be construed as lacking means for actualizing such functionality, i.e. not conveying that an action (e.g. by a computer execution) to realize this functionality so to yield a real-world output in terms of tangible, concrete and useful data.

The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a “useful, concrete, and tangible result” be accomplished. An “abstract idea” when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the “useful arts” when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a “useful, concrete and tangible result”.

As such, the above entities amount to non-practical or abstract entities for not being able to yield the realization of a tangible and useful result in terms of real-world application data. The claim will be rejected for leading to a non-statutory subject matter.

Claims 12 and 13 also fail to convey a hardware support to actualize the software functionality of the elements recited; and are likewise rejected.

Claim 14 recites the same software-only deficiencies as set forth in claim 11; and along with claim 15 is rejected likewise.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 6-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Iyengar, USPN: 6,874,146 (hereinafter Iyengar).

As per claim 1, Iyengar discloses a method for generating a software development repository to reflect extensions in an application framework comprising:

defining a repository framework (Fig. 1);

receiving application framework metadata (e.g. UML metamodel – col. 9, lines 1-11; model 21 – Fig. 2, M1 – Fig. 4), the application framework metadata specified utilizing constructs (e.g. Unified Modeling Language, UML reads on meta-level 2 – see col. 11, lines 24-27; M2 – Fig. 4) from an application framework meta-level (M2);

transforming the application framework metadata into an intermediate representation as a function of the application framework meta-level (M2) (e.g. col. 11, lines 19-42 – Note: XMI and DTD derived from reading constructs of UML model reads on intermediate representation – see Fig. 4) and a meta-level (MOF – col. 11, lines 24-27) for the application framework meta-level (M3);

generating the software development repository (e.g. Fig. 2, 4; col. 9, line 45 to col. 10, line 2) utilizing the intermediate representation.

As per claim 2, Iyengar discloses wherein the intermediate representation is XML ("Extensible Markup Language" – see *M2: AS XML DTDs* – Fig 4).

As per claims 3-4, Iyengar discloses wherein the software development repository includes a database schema (DTD, Fig. 5) and an executable component, the executable component providing at least one database service (CORBA-based software, CORBA interface - col. 9, lines 48-56); wherein the at least one service includes object oriented access, versioning, persistence and change management (e.g. *infrastructure services ... Corba interface repository ... database interoperability* – col. 9, lines 52-59; *XML APIs* – col. 3, lines 39-44; *object services 12* – col. 7, lines 48-53).

As per claim 6, Iyengar discloses wherein the step of generating the software development repository further includes the steps of generating a source file for generating an executable component (see A METHOD FOR PROVIDING OBJECT DATABASE INDEPENDENCE IN A PROGRAM WRITTEN USING THE C++ PROGRAMMING LANGUAGE, *incorporated by reference* – col. 8, lines 3-45) and a script file (XML – col. 5, lines 54-65; col. 6, lines 59-64; col. 6, lines 13-26; *incorporated by reference* – col. 8, lines 3-45

Note: creation of method invoking operations and manipulating database reads on programming of interface invocations and SQL query script creation) for generating a database schema.

As per claim 7, Iyengar discloses a method for generating a software development repository to reflect changes in an application framework comprising:

providing a first meta-level (M2) for representing the application framework metadata;
providing a second meta-level (M3) for representing the M2 meta-level (MOF, UML –Fig. 1; Fig. 4);

receiving application framework metadata, the application framework metadata specified utilizing constructs from the application framework meta-level (M2);

transforming the application framework metadata into an intermediate representation as a function of the application framework meta-level (M2) and the second meta-level level (M3);

generating the software development repository as a function of the intermediate representation;

all of which steps (receiving, transforming, generating) having been addressed in claim 1.

As per claims 8-10, refer to claims 2-4, respectively.

As per claim 11, Iyengar discloses an object repository generator comprising:

an interface for receiving a meta-model specification (UML metamodel – col. 9, lines 1-11; model 21 – Fig. 2, M1 – Fig. 4);

a metadata engine for performing at least one operation on the meta-model specification including at least generating an intermediate representation of the meta-model specification as a function of a first meta-level (e.g. col. 11, lines 19-42 – Note: XMI and DTD derived from

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reading constructs of UML model – or 1st level metadata -- reads on intermediate representation – see Fig. 4) and a second meta-level (MOF – col. 11, lines 24-27);

a generator component for generating the object repository (Fig. 2, 4; col. 9, line 45 to col. 10, line 2) as a function of the intermediate representation.

As per claim 12, Iyengar discloses wherein the meta-model specification utilizes at least a subset of UML ("Unified Modeling Language" - col. 9, lines 1-11; model 21 – Fig. 2, M1 – Fig. 4).

As per claim 13, refer to claim 6.

As per claim 14, Iyengar discloses An object repository generator comprising:

an interface for receiving a meta-model specification;

a metadata engine for performing at least one operation on the meta-model specification including at least generating an intermediate representation of the meta-model specification as a function of a first meta-level and a second meta-level, the meta-data engine including a database for storing a plurality of versions of an object repository;

a generator component for generating the object repository as a function of the intermediate representation.

The claim comprises all the limitations corresponding to those of claim 11, hence will incorporate the respective rejection as set forth therein.

As per claim 15, Iyengar discloses wherein the database storing versions of an object repository is utilized to provide migration of data (e.g. col. 10, line 64 to col. 11, line 3;
METHOD FOR LOCATING VERSIONED OBJECT WITHIN A VERSION TREE
DEPICTING A HISTORY OF SYSTEM DATA AND PROCESS FOR AN ENTERPRISE, A

METHOD FOR PACKING/UNPACKING C OPERATIONS TO/FROM RPC COMPATIBLE FORMAT USING THE RPC PROTOCOL TO OPERATE REMOTELY WITH AN OBJECT-ORIENTED REPOSITORY – col. 8, lines 3-46, *incorporated by reference* - Note: conversion from one metaformat to another and versioning of repository tree items reads on migration of data) - stored in the object repository.

As per claim 16, Iyengar discloses a method for providing generic migration of previously stored data in a software development repository (Fig. 1) to reflect changes in an application framework comprising:

- providing a first meta-level (M2) for representing the application framework metadata;
- providing a second meta-level (M3) for representing the M2 meta-level;

- receiving application framework meta-data, the application framework metadata specified utilizing constructs from the application framework meta-level (M2);

- transforming the application framework meta-data into an intermediate representation as a function of the application framework meta-level (M2) and the second meta-level level (M3);

- generating the software development repository as a function of the intermediate representation;

- transforming the previously stored data into a format compatible with the generated software development repository utilizing the intermediate representation.

The claim comprises all the limitations corresponding to those of claim 7, hence will incorporate the respective rejection as set forth therein.

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iyengar, USPN: 6,874,146.

As per claim 5, Iyengar does not explicitly disclose wherein the step of transforming the application framework into an intermediate representation is achieved using XSL ("Extensible Style Language") but the use of XSL to render a XML document was well-known at the time the invention was made. Based on the suggestion by Iyengar that in a future approach XSL can support XML editing (see col. 3, lines 45-50), it would have been obvious for one skill in the art at the time the invention was made to employ Iyengar's suggested method to render the XML because XSL is basically a programming language exclusively designed to support the grammar and syntax of XML according to W3C group, and using this XSL as shown by Iyengar's remarks would make use of existing technological programming language, obviating thereby the need of improvising new editing means for XML rendering.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (272) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

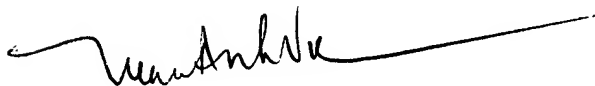
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571)272-3719.

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The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence - please consult Examiner before using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan A Vu
Patent Examiner,
Art Unit 2193
October 24, 2006